



**FPL Energy**  
**Seabrook Station**

**FPL Energy Seabrook Station**  
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DEC 18 2003

Docket No. 50-443  
NYN-03100

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555-0001

**Seabrook Station**

**Summary of Inspections of Reactor Pressure Vessel Lower Head Penetrations**

Reference: L-2003-234, FPL Energy Seabrook, LLC to USNRC; NRC Bulletin 2003-02, Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity, dated September 19, 2003.

FPL Energy Seabrook, LLC in accordance with NRC Bulletin 2003-02, *Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity* dated August 21, 2003 is enclosing a summary of Reactor Pressure Vessel Lower Head Penetration inspections completed during refueling outage OR09.

No findings of relevant indications of leakage were found on the lower head during the 100% bare metal inspection.

Should you have any questions regarding this letter, please contact Mr. James M. Peschel, Regulatory Programs Manager, at (603) 773-7194.

Very truly yours,  
FPL Energy Seabrook, LLC

Mark E. Warner  
Site Vice President

cc:

H. J. Miller, NRC Region 1 Administrator  
V. Nerses, NRC Project Manager, Project Directorate I -2  
G. F. Dentel, NRC Senior Resident Inspector

NYN-03100

Oath and Affirmation

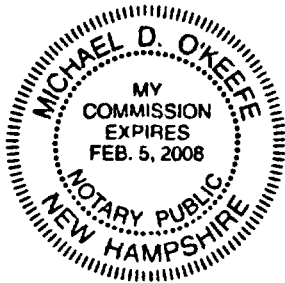
I, Mark E. Warner, Site Vice President of FPL Energy Seabrook, LLC, hereby affirm that the information and statements contained within this document are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

Sworn and Subscribed  
before me this

18 day of December, 2003

Michael D. O'Keefe  
Notary Public

Mark E. Warner  
Mark E. Warner  
Site Vice President



## **Enclosure 1 to NYN-03100**

FPL Energy Seabrook, LLC submits this report pursuant to NRC Bulletin 2003-02, *Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity* dated August 21, 2003. This report is being submitted within (60) days from plant restart from refueling outage OR09 on October 29, 2003.

Paragraph 2 under the Requested Information section of Bulletin 2003-02 states;

“Within 60 days of plant restart following the next inspection of the RPV lower head penetrations, the subject PWR addressees should submit to the NRC a summary of the inspections performed, the extent of the inspections, the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found.”

The following summary provides the requested information.

### **Inspection Performed**

A bare metal visual (BMV) inspection of each (58) bottom mounted instrumentation (BMI) penetration and lower head surface was performed.

### **Extent of Inspection**

A 360° visual inspection of the 58 BMI penetrations looking for evidence of penetration leakage and lower head surface metal degradation.

### **Inspection Method**

A direct visual inspection was utilized and supplemented with a mirror to improve observation angle and visibility. Access above the insulation deck was gained by removing four sections of insulation, one in each quadrant. Scaffolding was erected at these locations to provide adequate working height. Drop lights provided general illumination, with flashlights used to highlight areas of interest. Although not required, certified VT-2 visual examiners conducted the inspection. Illumination was verified for the direct visual inspection, including the mirror, at maximum working distance. Verification was made using an ASME Section XI near distance vision test chart for VT-2 examination.

### **As-Found Condition of Lower Head**

None of the 58 BMI penetrations exhibited evidence of leakage. No metal degradation was observed on the RPV lower head surface. A few small boric acid streams originating from above the lower head were observed. Some tape residue was also observed on the lower head surface and a few BMI tubes. The tape residue is most likely from protective covers applied to the penetrations during construction.

### **Disposition of Boric Acid Deposits**

A sample from the boric acid streams was retrieved and analyzed by Chemistry. Analysis indicated no current leakage. The absence of specific marker nuclides indicate the sample deposit to be pre-1996 which is believed to be from known cavity seal ring leakage. The boric acid streams were cleaned with demineralized water. A post cleaning inspection determined that no metal degradation existed. The tape residue was evaluated by Engineering and determined to be acceptable based on the conditions required to initiate and propagate exterior stress corrosion cracking not existing.

### **Corrective Actions as a Result of Indications**

No corrective actions were required beyond cleaning the observed boric acid streaming. No evidence of penetration leakage or metal degradation was observed.